Treating Selective Mutism with Exposure Therapy: A Case Study

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Abstract

This paper describes the use of exposure therapy for treating selective mutism, a disorder affecting nearly one percent of youth, and is associated with significant impairment in social, academic, and family functions. Treatment consisted of a modified exposure-based treatment protocol for treating pediatric obsessive-compulsive disorder (OCD). The modified protocol involved providing patients and caregivers with psychoeducation followed by graded exposure therapy. Adaptations to the original treatment protocol included increasing parental involvement, emphasizing contingency management, and decreasing the use of cognitive restructuring. This article also includes specific suggestions for clinicians to replicate procedures and results of this study within their own clinical practice. Finally, a case example is provided documenting the successful treatment of a twelve-year-old male who received twenty-one weekly therapy sessions. Prior to treatment, the child displayed an incomplete response to sertraline treatment. However, the child fully recovered at post-treatment following a complete trial of exposure therapy. Specifically, he was able to talk with his father, extended family members, friends, teachers, and appropriate strangers. Further, the child retained all treatment gains at three-month follow-up.

Keywords: selective mutism, cognitive-behavioral therapy, exposure therapy, exposure and response prevention, treatment
Children with selective mutism often experience severe social anxiety associated with speaking in social settings or to specific people (American Psychiatric Association, 2000). Although these children generally are capable of verbal communication, they suffer from an anxiety-driven performance deficit. Thus, the presence of social anxiety mediates how these children perform in different settings. For example, a child who is anxious about negative evaluation by his or her peers may refuse to talk in school yet freely communicate with caregivers and siblings at home.

In addition to being personally distressing, selective mutism often causes significant impairment in social, academic, and family functioning (Viana, Beidel, & Rabian, 2008). Furthermore, these impairments may extend beyond childhood as adults who had selective mutism in their childhood often are described as being less independent, occupationally successful, and self-confident in comparison to their non-disordered peers (Remschmidt, Poller, Herpertz-Dahlmann, Hennighausen, & Gutenbrunner, 2001). Thus, the long-term effects of selective mutism often exist beyond symptom remission and extend across the lifespan (Steinhausen, Wachter, Laimböck, & Metzke, 2006).

Selective mutism is relatively common in pediatric populations. Almost 1% of children in the United States will meet diagnostic criteria for selective mutism at some point in childhood (Bergman, Piacentini, & McKraken, 2002; Elizur & Perednik, 2003). The disorder is slightly more common in females than in males and its peak onset is during the preschool years (approximately 3 to 4 years; Cunningham et al., 2004; Garcia et al., 2004; Steinhausen & Juzi, 1996). Regarding the psychosocial impacts of the disorder, children with selective mutism suffer from peer rejection, poor social skills, a
paucity of verbal language, and impaired academic performance (Cohan et al., 2006; Cunningham et al., 2006; Remschmidt et al., 2001; Steinhausen et al., 2006). However, despite these negative impacts, most youth with selective mutism do not immediately receive treatment (Chavira, Stein, Bailey, & Stein, 2004; Kumpulainen, 2002). In fact, a study by Kristensen (2000) found the average lag between the onset of selective mutism symptoms and disorder diagnosis to be 14.1 months.

**Etiology of Selective Mutism**

Combinations of genetic and environmental factors influence the development of selective mutism. About 30% of children with selective mutism have a first-degree relative who has (or had) the disorder and as many as 70% of children with the disorder have a first-degree relative with social phobia or social anxiety disorder (Black & Uhde, 1995). Additionally, a recent study found higher rates of social anxiety (37% versus 14%) and avoidant personality disorder (18% versus 5%) in parents of youth with selective mutism relative to controls (Chavira, Shipon-Blum, Hitchcock, Cohan, & Stein, 2007).

Environmental causes of selective mutism include the presence of maladaptive family dynamics, dysfunctional reinforcement patterns, a history of adjustment problems, and experiencing distress related to cultural or linguistic acculturation (Viana et al., 2008). Collectively, heritable and environmental factors interact to influence the expression of selective mutism in vulnerable children. For example, an introverted child with difficulty regulating negative emotions, and experiences considerable anxiety in social situations, may develop selective mutism in an environment that overwhelms his or her ability to cope with anxiety and further establishes his or her dependence on others.

**Selective Mutism and Psychopathology**
The majority (74%) of youth with selective mutism also have a comorbid anxiety disorder (Kristensen, 2000). The most common comorbid disorders include social phobia (61–68%), specific phobia (50%), and separation anxiety disorder (32%) (Kristensen, 2000; Manassis et al., 2003). These high comorbidity rates, especially between selective mutism and social phobia, contribute to the belief that selective mutism is a severe variant of social anxiety (Black & Uhde, 1995). In support of this position, some studies suggest as many as 70% to 80% of youth with selective mutism also meet diagnostic criteria for social phobia (e.g., Yeganeh, Beidel, Turner, Pina, & Silverman, 2003).

The relationship between selective mutism and externalizing psychopathology is less established than the relationship between selective mutism and internalizing psychopathology (Viana et al., 2008). Children who refuse to speak with authority figures (e.g., teachers, psychologists) may appear oppositional or defiant. However, relatively few children with selective mutism also have comorbid externalizing disorders (e.g., oppositional defiant disorder, attention-deficit/hyperactivity disorder; Manassis et al., 2007; Vecchio & Kearney, 2005). Thus, externalizing behavior in youth with selective mutism often results from being asked to confront fearful or anxiety-provoking situations that overwhelm their coping abilities in these situations (Sharp, Sherman, & Gross, 2007).

Assessment for Selective Mutism

Prior to treating selective mutism, assess the child’s symptoms and level of impairment to rule out other conditions that can mirror selectively mute symptoms (e.g., aphasia, autism, intellectual disabilities, limited language proficiency). Although no single measure is adequate to achieve an irrefutable diagnosis of selective mutism,
multi-modal and multi-trait assessment strategies employing clinical interviews, self-report measures, parent and teacher reports, and observations, may shed light on the nature of a child’s selective mutism symptoms as well as his or her level of functioning (Viana et al., 2008). Furthermore, data needs collected across a variety of settings because selective mutism may manifest only in some settings or under specific conditions. For example, a child may be too frightened to speak in public situations in school but openly communicate with a guidance counselor or school psychologist in a private office. Thus, it is relatively common for caregivers, teachers, and mental health professionals to have different perspectives of a selectively mute child as well as how the disorder affects his or her behavior. To overcome communication obstacles, an evaluator can assess a child in a comfortable environment, have caregivers record the child speaking when he or she is willing to do so, and allow for the presence of “safety” or “support” people during clinical interviews.

**Treatment for Selective Mutism**

*Pharmacotherapy*

Although treatment literature for selective mutism is relatively nascent, some pharmacological and behavioral treatments exist for the disorder. Compared to other medications, the greatest empirical support exists for the use of serotonin reuptake inhibitors (SRIs) in the treatment of the disorder (Viana et al., 2008). However, because of untoward treatment effects associated with the use of SRIs in young children with selective mutism (e.g., behavioral disinhibition), these medications may not be appropriate for many youth (Dummit, Klein, Tancer, Asche & Martin, 1997). Additionally, treatment with SRI medication generally only results in mild to moderate
symptom relief in children with selective mutism, and premorbid symptoms often return following the discontinuation of SRI medication in these youth (Viana et al., 2008). Lastly, pharmacological treatments such as SRIs do not contribute to the development of appropriate social skills and other adaptive behaviors that can mitigate symptoms or related distress (Beidel et al., 2007).

Behavioral Therapy

Behavioral treatments for selective mutism often use a combination of strategies such as shaping, contingency management, stimulus fading, self-modeling, and systematic desensitization (Kehle, Madaus, Baratta, & Bray, 1998; Watson & Kramer, 1992). In general, reinforce children for vocalizations, displaying functional communication, and speech. Furthermore, they may be required to use their voice to earn desired objects or engage in preferred activities during therapy and behavioral chaining may help with the development of increasingly complex verbal behavior. For example, a child may be first reinforced for using one or two word utterances when asking for items in the school cafeteria. Then, when he or she masters this task, reinforce the child for using complete sentences.

Exposure Therapy

Despite its established efficacy and prominent use for treating social anxiety (Feske & Chambless, 1995), exposure therapy is largely absent from the selective mutism treatment literature. Exposure therapy involves confronting an anxiety-provoking stimulus or situation, experiencing the ensuing anxiety or stress, and then preventing oneself from engaging anxiety reductive rituals (e.g., reassurance seeking, avoidance). The treatment purports to break two associations: 1) The anxiety producing
stimulus/situation warrants fear in the first place, and 2) The individual cannot manage
the situation without performing some form of anxiety reducing behavior (e.g., a
compulsion, avoidance). Collectively, breaking these associations often results in
reductions in anxiety and improvements in psychosocial functioning (Jordan, Reid,
Mariaskin, Augusto, & Sulkowski, 2012).

To treat social anxiety, an exposure might involve having the client purposely
mispronounce a word in the company of others and then not leave the group or situation
after the mispronunciation or engage in any anxiety reductive behaviors such as seeking
reassurance from others or confessing that the mistake was intentional. Through repeated
exposures triggering anxiety, as well as the experience of coping with anxiety instead of
avoiding it, clients can learn to tolerate their fears of negative evaluation. Additionally,
through repeated exposure, children can learn their fears are exaggerated and people are
less critical of them than they initially perceived. As a preliminary effort to illustrate the
utility of exposure therapy to treat selective mutism, the following case example is
presented. To our knowledge, this is the first case study explicitly describing the use of
exposure therapy to treat selective mutism.

Case Report

Participant

James Smith (pseudonym) was a twelve-year-old Caucasian male brought to
therapy by his parents because of his selective mutism symptoms. According to Mr.
Smith’s report first noticed James’ symptoms of selective mutism after his second
birthday when he stopped speaking to other people with the exception of his close family
members. At the time, he stopped talking with his father, all extended family members,
family acquaintances, strangers, and people at school. No precipitating event (e.g., trauma, traumatic brain injury, pervasive developmental delay) could be identified to explain the change in his behavior. Additionally, James reached all of his developmental milestones for functional communication and verbal expression within normal limits according to psychoeducational records provided by Mr. and Mrs. Smith. Psychological assessment and treatment began after obtaining written consent from Mr. Smith as well as verbal consent from James. A family history of anxiety was reported in the initial assessment. James’ family history was negative for serious medical and psychological disorders.

While concomitantly taking sertraline (150 mg), James participated in play therapy for several months prior to intake. According to Mr. and Mrs. Smith, James displayed no notable improvement in functioning or reductions in his symptoms of selective mutism associated with this treatment regime. Mr. Smith reported James felt sertraline helped him feel less anxious in general but not more willing to speak in social situations with non-family members. Because of a lack of therapeutic efficacy and parental concerns about the long-term safety of SRI in children, James’ treating psychiatrist discontinued sertraline treatment prior to his receipt of exposure therapy. James also stopped attending play therapy prior to receiving exposure therapy because of his limited benefit from the treatment.

Procedure

A licensed psychologist and manuscript co-author with expertise in assessing childhood anxiety disorders diagnosed James with selective mutism at the age of 12. A ninety-minute clinical interview was conducted with James and Mr. Smith involving
assessing selective mutism symptoms according to the latest version of the American Psychiatric Association Diagnostic and Statistical Manual (DSM-IV-TR; American Psychiatric Association, 2000). This assessed psychiatric symptoms in the patient as well as symptoms of other psychiatric conditions that can mirror selective mutism symptoms (e.g., autism spectrum disorders, intellectual disabilities, aphasia, etc.). Other information such as family composition, history of illness, and general psychosocial functioning (i.e., academic, social, and family functioning) was assessed as part of the intake process. James’ guidance counselor was interviewed on two separate occasions to assess James’ behavior at school as part of an ongoing assessment process. Also, consistent with best practices and as part of a multi-trait assessment process (Saklofske, Joyce, Sulkowski, & Climie, in press), the treating therapist observed James during a task in which James was encouraged to interact with his classroom peers and teacher. During classroom observations, James said “hi” to his best friend and to his favorite teacher but he did not say anything else to these individuals or to other peers. Overall, assessment results indicated James met diagnostic criteria for a diagnosis of selective mutism and social phobia. He did not meet criteria for any other comorbid psychiatric diagnoses.

Results of psychological assessment helped guide treatment decisions. James’ treatment was roughly modeled on the Lewin et al. (2005) pediatric obsessive-compulsive disorder exposure-based treatment protocol. This protocol includes psychoeducation, cognitive techniques, and exposure therapy as integral treatment components. This particular protocol was selected because of its heavy emphasis on exposure therapy tasks, reduced reliance on cognitive and verbal interventions, distinct focus on the inclusion of caregivers in treatment, and its relative flexibility for adaptation
to other forms of psychopathology (Storch et al., 2007). In addition, consistent with the Lewin et al. (2005) protocol, treatment focused on reducing caregiver accommodation of anxiety-driven symptoms (e.g., ordering meals for the child at restaurants) and training caregivers to be between-session coaches (i.e., guides who help patients to confront fears and stressors outside of therapy sessions to facilitate treatment generalization). Finally, knowing unanticipated reactions can occur in children during exposure therapy (e.g., failure to habituate), appropriate precautions were implemented to reduce the risk of critical incidents during exposure therapy tasks (Pence, Sulkowski, Jordan, & Storch, 2010).

To augment the aforementioned protocol for treating selective mutism, contingency management techniques such as providing positive reinforcement (e.g., going to his favorite restaurant) and implementing response cost interventions (e.g., not being able to play video games) were used to facilitate treatment engagement. Research suggests contingency management strategies are associated with increased treatment motivation and engagement in youth with selective mutism (Amari, Slifer, Gerson, Schenck, & Kane, 1999).

During the first two therapy sessions, psychoeducation was provided, and an exposure therapy hierarchy was developed on the third session involving ranking stressors or anxiety-provoking situations from least to most distressing in terms of subjective units of distress (SUDs). To create a hierarchy, information was solicited from Mr. Smith and James on situations that reliably cause James to feel anxious and contribute to his selective mutism such as ordering food in a restaurant or asking for directions. James was then encouraged to rank the level of fear/anxiety he would
experience if he had to experience each situation by holding up a certain number of fingers corresponding to his anxiety level. Each finger corresponded to one point on a ten-point scale ranging from 1, “very low anxiety” to 10, “extreme anxiety.”

Exposure therapy began with the selection of a mild to moderately distressing exposure task (~4 SUDs) chosen by James and attempted in session four. This task required James to introduce himself to other staff members in the psychological clinic. Following success with this task, subsequent exposure therapy sessions (5-17) involved gradually exposing the patient to other hierarchy items in a sequential order (i.e., from least to most anxiety provoking). Following established practices, the majority of time spent in each therapy session involved exposure tasks that were complimented with cognitive therapy interventions (e.g., helping the patient challenge a catastrophic interpretation of an external event, fight back against anxiety sensitivity, etc.). Further, Mr. Smith was present in all sessions to observe the implementation of exposure tasks and to learn how to reduce gradually his accommodation of anxiety-sustaining behaviors (e.g., ordering the patient’s food, talking to his teachers for him, etc.). Lastly, homework, or between-session practice, was assigned after each therapy session. The final therapy session (session 24) involved a discussion on strategies for relapse prevention and how to seek help if further therapy is needed in the future.

Results

This case study utilized a modified exposure-based therapy protocol by Lewin et al. (2005) initially designed to target pediatric OCD symptoms. A number of specific modifications to this protocol made it more relevant for the treatment of selective mutism. These modifications included a decreased reliance on cognitive techniques,
increased parental involvement, and increased reliance on contingency management techniques. These modifications and the rationale behind them are discussed in detail below.

Language and communication with a therapist mediates the learning and application of cognitive interventions (e.g., challenging cognitive errors, de-catastrophizing). Youth with selective mutism display a paucity of verbal communication that can forestall progress with cognitive therapy. Additionally, some notions associated with cognitive therapy such as the process of actively evaluating one’s thoughts and the concept of metacognition (i.e., thinking about one’s thinking) may be too abstract for many youth to grasp, especially those with co-occurring learning problems (Rosenzweig, Krawek, & Montague, 2011). And finally, children may need to display considerable insight into their symptoms. They need to know how thinking may influence the symptoms to benefit from cognitive interventions since it is their responsibility to evaluate and modify his or her cognition.

In light of these issues, only cognitive interventions were used to engage James in exposure tasks. For example, similar to procedures commonly used to externalize and confront OCD symptoms (March & Mulle, 1998), James was encouraged to identify when anxiety interfered with his ability to perform functional activities and then actively “fight back” against the anxiety. This process encouraged James to overcome his initial hesitations to engage in exposures better, helping him to identify when anxiety was holding him back as opposed to believing there was something to be afraid of or that something was wrong with him.
Reducing the accommodation of anxiety sustaining behaviors associated with selective mutism may be particularly important for obtaining and sustaining effective treatment outcomes. Although accommodating these behaviors can help a child function more effectively in some settings, this process can increase a child’s dependence and prevent him or her from habituating to anxiety-provoking situations or stimuli. Additionally, accommodating a child’s anxiety and avoidant behavior can exacerbate anticipatory anxiety when caregivers inadvertently convey specific situations warrant worry or concern by their efforts to step in and manage the situation instead of allowing the child to learn how to cope with the situation.

To reduce the accommodation of anxiety sustaining behaviors, therapists can model for caregivers how to address a child’s avoidance and escape behaviors in session. For example, the therapist in the current case study responded to the child’s initial resistance to engage in exposure tasks by turning the tasks into games (e.g., “Let’s see who can say ‘hi’ to more people”), using humor, and remaining firm and consistent (e.g., speaking to the child in a “business-like tone”). During times in which Mr. or Mrs. Smith unknowingly tried to accommodate James’ anxiety symptoms, the therapist kindly pointed out the pattern and conducted a brief discussion on whether accommodation/providing reassurance would likely contribute to sustaining James’ anxiety. Over the course of treatment, Mr. and Mrs. Smith gradually became more aware of when they accommodated James’ anxiety and made conscious efforts to reduce this behavior as evidenced by questions they raised about how they should respond to him in public settings while replicating exposures for homework.
Contingency management techniques, such as providing positive reinforcement for displaying desired behaviors or using response cost to manage undesirable ones, can help facilitate therapy. The provision of positive reinforcement in particular is associated with increased treatment motivation and engagement with youth who have selective mutism (Amari et al., 1999). James’ treating psychologist and his father verbally praised James for each successive item he accomplished on his fear hierarchy during treatment sessions. Verbal praise was modeled during treatment and his father reported using it during the successful completion of homework tasks. In addition, occasionally James was rewarded with snacks in-session and having lunch at his favorite restaurant after sessions, when he made big gains with respect to moving up his fear hierarchy.

Marked improvements were noted in James’ selective mutism symptoms and were observed during therapy and at post-treatment. The progress, in fact, was profound. During the course of treatment, James improved from only being able to speak with close family members to being able to communicate openly with a range of individuals in public settings such as at school, stores, and restaurants. These gains were maintained at three months post treatment, suggesting the treatment gains associated with exposure therapy for selective mutism may be durable. In follow-up discussion on James’ progress, Mr. Smith stated to the treating therapist “I have my son back” and “I cannot thank you enough.”

**Conclusions and Implications**

Selective mutism is relatively common in pediatric populations and it is associated with significant impairment in social, academic, and family functioning (Viana et al., 2008). If untreated, symptoms of this disorder can contribute to long-term
psychosocial adjustment difficulties or impairments across the lifespan, as adults who had selective mutism in their childhood often are described as being less independent, occupationally successful, and self-confident in comparison to their non-disordered peers (Remschmidt et al., 2001; Steinhausen et al., 2006). Fortunately, treatments exist for selective mutism such as SRIs and behavioral therapy. However, SRI medication is associated with untoward treatment side effects, and extant behavioral approaches to treating selective mutism may overly rely on the use of reinforcers while neglecting to encourage children to confront their fears gradually and systematically. Exposure therapy, which involves confronting an anxiety-provoking stimulus or situation, experiencing the ensuing anxiety, and then preventing one’s self from engaging anxiety reductive rituals, may be an effective standalone or complimentary treatment for selective mutism. The included case study results highlight the promise of exposure therapy for treating selective mutism, and the importance of evaluating the efficacy of this treatment in subsequent studies.
References


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